

1. Negri²¹ says that in the diary of his journey to southern Abyssinia *Negripteris scioana* is recorded to have been seen on the lower escarpments of the southern side of Mont Fantallè (about 1000 m.) also.

2. As I pointed out above, the specimen collected by Mr. and Mrs. Lort Phillips and labelled "Somaliland," was probably gathered in the Wagga Mountains, where these collectors gathered the greater part of their collections during their second journey to Somaliland.

3. Collenette, on the label of the specimen collected at Medisheh cited above, remarks that this fern is present at Buran also.

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A New Erect Species of the *Selaginella* *rupestris* Group

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It is especially appropriate that the following new species be named for Mr. C. A. Weatherby, whose careful and painstaking studies have greatly advanced our knowledge of the species of the *Selaginella rupestris* group. The classification of the species-groups *S. oregana* and *S. Parishii* in particular has been placed on a firm foundation by his work.

Selaginella Weatherbiana, sp. nov. Planta 5-15 cm. alta; caules bifformes, unus prostratus repens subterraneus ad apicem radicans, alter erectus aërius basim solum radicans; folia caulium erectorum 1.3-2.0 mm. longa (seta et basi adnata excludentia), 0.4-0.5 mm. lata, subulato-lineararia, ad basim convexa, ad apicem valde carinata, ciliis dentiformibus 0.03-0.06 mm. longis vel brevioribus, basi adnata circa 0.4 mm. longa, seta 0.4-0.9 mm. longa, translucente, luteo- vel subviridi-alba, plerumque laevi; sporophylla 1.6-2.0 mm. longa (seta excludentia), 0.7-0.9 mm. lata, anguste deltoideo-ovata, leviter biauriculata, ad basim convexa, ad apicem valde carinata, seta eis foliorum simili; megasporae flavae, 0.31-0.49 mm. diametro, latere commissurali reticulato-rugoso, latere altero leviter reticulato-rugoso vel sublaevi; microsporae 43-54 μ diametro.

²¹ In Pichi-Sermolli, *loc. cit.* 157.

Plant 5–15 cm. tall; *stems* of two kinds, one prostrate, creeping, subterranean, sparingly branched, sparingly rooting throughout, the other erect, aërial, 1–2 mm. in diameter, including the leaves (dry), or 2–3.5 mm. in diameter (boiled), rooting only at the base or rarely decumbent at the base and rooting in the basal half, abundantly branched, especially above the base, the branches approximate, the pinnately divided ones once-pinnate at first, becoming bipinnate; *leaves* of the prostrate stems 0.9–1.3 mm. long (excluding the seta and the adnate base), 0.4–0.7 mm. wide, oblong-ovate, whitish or pale whitish green, from nearly plane at the base of the blade to convex at the tip, the marginal cilia usually numerous, dentiform, the largest 0.03–0.05 mm. long, ascending or patent, the adnate base 0.4–0.9 mm., mostly about 0.8 mm. long; seta lacking or up to 0.4 mm. long; *vegetative leaves* of the erect stems ascending, spreading at an angle of 30°–40° in boiled material, more appressed, sometimes tightly so in the dry condition, wholly concealing the stem, 6-ranked, 1.3–2.0 mm., mostly 1.7–1.9 mm. long (excluding the seta and the adnate base), 0.4–0.5 mm. wide, subulate-linear, light olive green to gray-green, occasionally lightly glaucous, convex at the base of the blade to strongly carinate at the tip, glabrous dorsally or slightly short-pubescent at the base of the blade and on the adnate base, the marginal cilia many or few, dentiform, the largest 0.03–0.06 mm. long, more abundant and patent toward the base, fewer and ascending above, the adnate base about 0.4 mm. long, evident down to the level of the next two leaves below, the seta 0.4–0.9 mm., mostly 0.4–0.6 mm. long, translucent, yellowish or greenish white, usually smooth, occasionally slightly scabrous; *sporophylls* 1.6–2.0 mm. long (excluding the seta), 0.7–0.9 mm. wide, narrowly deltoid-ovate, slightly biauriculate, light olive green to gray-green, occasionally lightly glaucous, from strongly convex at the base to strongly carinate at the tip, glabrous dorsally, the marginal cilia numerous, dentiform, the largest 0.03–0.05 mm. long, ascending, or patent only at the very base, the seta 0.4–0.9 mm., mostly 0.5–0.7 mm. long, translucent, yellowish or greenish white, usually smooth, occasionally slightly scabrous; *megaspores* yellow, 0.31–0.49 mm., mostly 0.37–0.41 mm. in diameter, moderately rugose-reticulate on the commissural face, obscurely rugose-reticulate or nearly smooth on the outer face; *microspores* 43–54 μ , mostly 50 μ in diameter.

Type in the herbarium of the Missouri Botanical Garden, collected at Mouth of Indian Creek, Pecos River National Forest, New Mexico, alt. about 8000 feet, July 25, 1908, by P. C. Standley (no. 4558). Fragment (US), isotype (NY).

OTHER SPECIMENS EXAMINED:

COLORADO: Pikes Peak region, Aug. 14, 1913, *J. F. Macbride* 2651 (MBG); near Minnehaha, Pikes Peak, September, 1901, *Underwood & Selby* 2 (NY); Pikes Peak, September, 1901, *Underwood* (NY); Coal Creek Canyon, southwest of Eldorado Springs, Boulder county, alt. ca. 6200 ft., June 27, 1942, *Ewan* 14370 (MBG).

NEW MEXICO: Harvey's Upper Ranch, Pecos River National Forest, alt. ca. 9600 ft., Aug. 1, 1908, *Standley* 4626 (MBG, NY, US); Below Winsor's Ranch, Pecos River National Forest, alt. ca. 8300 ft., July 3, 1908, *Standley* 4158 (US); East fork of Gallinas river, El Provenir, San Miguel County, Oct. 23, 1939, *Drouet & Richards* 3337 (MBG).

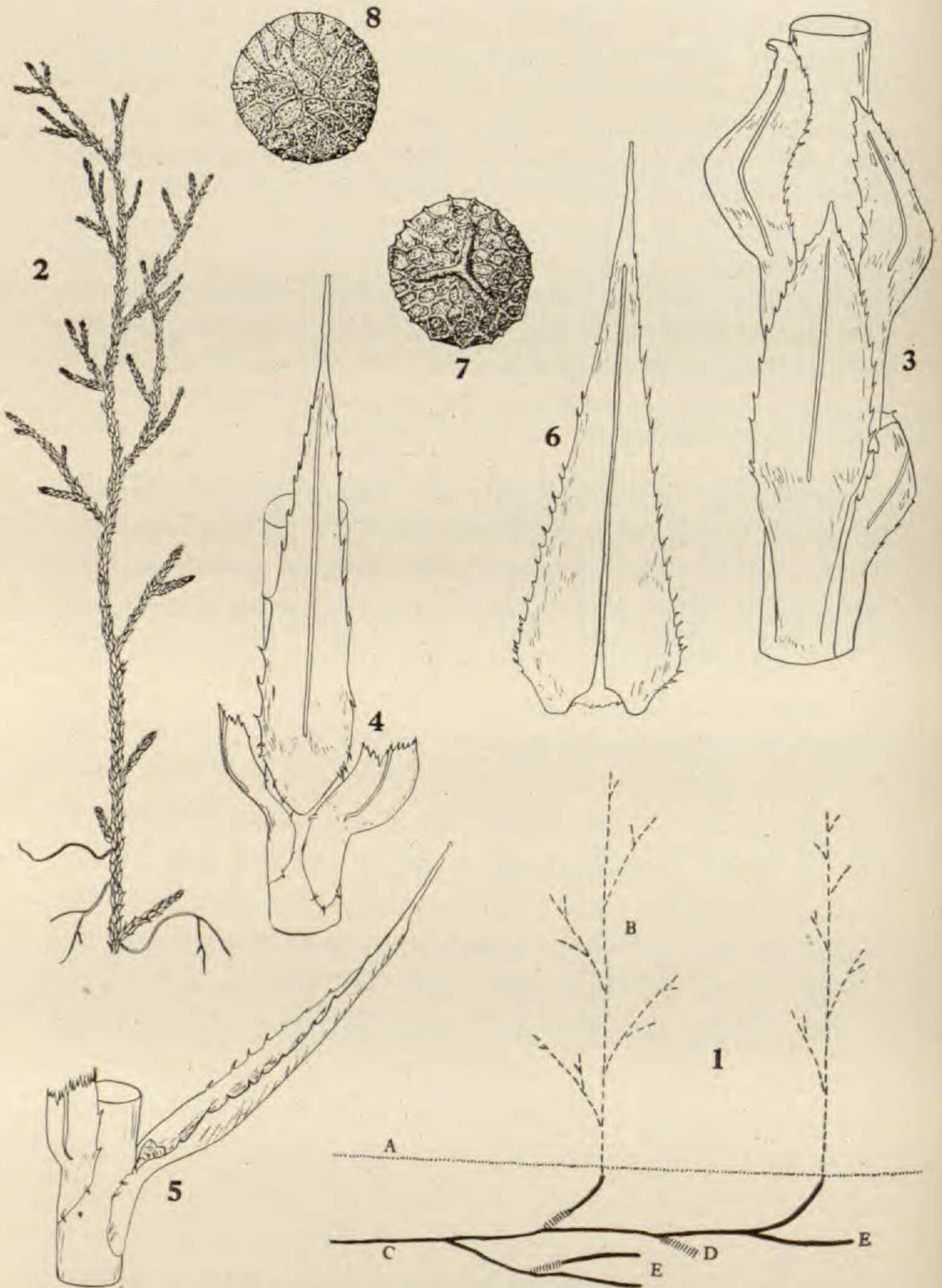
Selaginella Weatherbiana has been generally passing in the herbarium as *S. Underwoodii*. It may be sufficiently distinguished from that species and from the other erect species of the *S. rupestris* group as follows:

S. Coryi has the leaves muticous rather than setiferous, the vegetative leaves short-adnate rather than long-adnate to the stem, and the stems, including the leaves, slenderer, 0.5–0.75 mm. in diameter (dry).

S. Bigelovii, *S. rupicola* and *S. neomexicana* all have the vegetative leaves abruptly adnate to the stem rather than long-adnate; the latter two species also have the marginal cilia piliform rather than dentiform; in *S. rupicola* these are especially long and patent.

S. tortipila has tortuous and deciduous tips on the setae.

S. arenicola and *S. acanthonota* have broadly deltoid-ovate and strongly biauriculate sporophylls rather than narrowly deltoid-ovate and slightly biauriculate ones. They are also distinguished by their habit of growth. These two species have only erect, aërial stems. At first a branch is elongate and simple, later lateral branches are produced. The basal ones function as buds and remain short, the upper ones elongate and may rebranch. They produce either strobili which die after maturity or



SELAGINELLA WEATHERBIANA (FIGS. 2-8 DRAWN FROM THE TYPE). FIG. 1. DIAGRAM OF A PLANT, A, GROUND LEVEL, B, AERIAL STEM, C, SUBTERRANEAN STEM, D, LATERAL BUD, E, GROWING TIPS OF THE SUBTERRANEAN STEM; FIG. 2. AERIAL STEM, $\times \frac{3}{4}$; FIG. 3. LEAVES OF SUBTERRANEAN STEM, $\times 20$; FIG. 4. LEAF OF AERIAL STEM, DORSAL VIEW, $\times 20$; FIG. 5. LEAF OF AERIAL STEM, $\times 20$; FIG. 6. SPORO-PHYLL, DORSAL VIEW, $\times 20$; FIG. 7. MEGASPORE, COMMISSURAL FACE, $\times 35$; FIG. 8. MEGASPORE, OUTER FACE, $\times 35$.

vegetative branches which continue growth. Eventually all of the growing tips have developed into strobili and the entire upper branch system dies. At this time the short basal branches become active, elongate and each may produce a new branch system following the course of events outlined. In *S. Weatherbiana* there are two types of stems, one prostrate and subterranean, the other erect and aërial. The subterranean stem produces three kinds of branches; one is a replica of itself, elongate with the leaves distant; another is a short compact lateral branch (a bud), with the leaves small and closely imbricate; the third is an erect aërial branch with green leaves. That is, a growing tip of the subterranean stem may continue its growth, may produce a lateral bud or may produce an erect aërial stem. The lateral bud develops, after a time, either into a subterranean branch or into an erect aërial branch. The aërial stem may be pinnately branched, or it may be bipinnate or of a more complicated type. The strobili die after maturity but strobili are not produced by all of the growing tips. The branch system dies eventually, although a number of potentially active vegetative branches are still present.

The type of growth habit may be an important character, particularly useful in establishing relations between species, but due to the inadequate nature of most herbarium material I have not been able to describe it in other species.

S. Riddellii has the lateral branches strictly erect rather than ascending; the sporophylls are broadly rather than narrowly deltoid-ovate and strongly rather than slightly biauriculate.

S. Underwoodii has an epigeous stem that is rooted throughout, narrower vegetative leaves ($2-2.5 \times 0.3-0.4$ mm.) and strongly biauriculate sporophylls.

S. Weatherbiana appears to be most closely related to *S. Riddellii* and *S. Underwoodii*. All have the leaf base

long-adnate to the stem. It shares the erect habit with *S. Riddellii* and the megaspores are similar. The color and general aspect of the leaves are quite similar to those of *S. Underwoodii*.

I am indebted to my wife for aid in the preparation of the plate.

MISSOURI BOTANICAL GARDEN.

Lycopodium carolinianum in Tropical Africa

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Lycopodium carolinianum L. appears in the first edition of the Species Plantarum,¹ the name being based on the description and figure in Dillenius' Historia Muscorum² of "*Lycopodium pinnatum repens, spicis et pediculis singularibus longis.*" There is no specimen of the species in the Linnean Herbarium in London, but in the herbarium of Dillenius, preserved at Oxford, the writer has had the privilege of examining the specimen which formed the basis of the description and figure in the "Historia." This specimen, which is thus the type, is stated by Dillenius to have been collected in Carolina by one Marcus Catesby. The sheet on which it is mounted contains three other specimens of *Lycopodium*: one of *L. inundatum*, one of *L. alopecuroides* and another which may also be *L. alopecuroides*. The sheet, in fact, represents the plants portrayed on *pl. 62* of the Historia. Although in figure 6 of the plate the figure of our species is shown bearing three fruiting spikes, the specimen itself possesses only one. This may be a case of artists' license, since the spikes certainly appear to be unnaturally crowded in the figure. There is no doubt, however, that the specimen is an American one and the figure an accurate representation of it.

¹ Linnaeus, Species Plantarum 1104. 1753.

² Historia Muscorum 452, *pl. 62, fig. 6.* 1741.